REMARKS

Examiner has rejected claims 1 through 36 under 35 U.S.C. § 112, second paragraph.

Examiner has rejected claims 1 through 36 under 35 U.S.C. § 101.

Applicant has amended claims 1 and 19 to increase clarity.

Rejection under 35 U.S.C. § 112, second paragraph

Examiner has rejected claims 1 through 36 under 35 U.S.C. § 112, second paragraph. Applicant respectfully traverses the rejection.

Criteria for a Rejection under 35 U.S.C. § 112, second paragraph

In rejecting a claim under the second paragraph of 35 U.S.C. § 112, it is incumbent on the Examiner to establish that one of ordinary skill in the pertinent art, when reading the claims in the light of the supporting specification, would have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. *Ex parte Wu*, U.S.P.Q.2d 20231, 2033 (B.P.A.I. 1988).

Applicant believes that Examiner has failed to show that any claim in the present case fails this test.

Discussion of Errors in Examiner's Rejection

Examiner has stated the following: "A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced."

Applicant notes that this statement is true *in referring to the claim as a whole*. That is, a claim that merely recites a use without any active, positive steps delimiting how this use is actually practiced is indefinite.

Under this standard none of the claims of the present case are indefinite. For Example, claim 1 sets out a method for selecting and using a sub model for issue solution. Four active, positive steps (i.e., steps (a) through (d)) are recited which delimit how the selection and use is accomplished.

Examiner has mistakenly taken a requirement for a claim as a whole, and tried to make it a requirement for a substep of a claim. Specifically, substep (b.1) of claim 1 states the following limitation: "using a Bayesian network structure to identify the underlying issue and the associated sub model". Examiner has argued the following: "As disclosed, the above mentioned claims focus on the use of a Bayesian Network without delineating the steps or process used to instantiate the subordinate issues and sub-models cited."

Applicant notes that claim 1 does not focus on the use of a Bayesian Network. Use of a Bayesian Network is only mentioned as part of one substep (not even a step) of claim 1. Three of four steps of claim 1 make no mention of a Bayesian network.

Applicant does agree with Examiner that substep (b.1), mentioning a Bayesian network structure, could include additional substeps further breaking down and describing subordinate issues, etc. However, this is true of any step or substep in any claim ever written. Such breaking down of steps and substeps ad infinitum is not required by the patent laws. Indeed since every conceivable step or substep can be broken into additional subparts, it would seem impossible to come up with any step or substep that could not be further broken down to instantiate subordinate issues.

Rather, the second paragraph of 35 U.S.C. §112, requires only that one of ordinary skill in the pertinent art, when reading the claims in the light of the supporting specification, would have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. Substep (b.1) of claim 1 fulfills this requirement.

Specifically, one of ordinary skill in the pertinent art, when reading the claims in the light of the supporting specification, would be able to ascertain with a reasonable degree of precision and particularity whether a Bayesian network structure is used to identify an underlying issue and associated sub model, as set out in substep (b.1) of claim 1. For example, a person of ordinary skill in the art might first ascertain whether an underlying issue has been identified and whether an associated sub model has been identified for providing a solution to the underlying issue. If so, then the person of ordinary skill in the art would then merely have to ascertain whether a Bayesian network

was used in the identification. Since Bayesian networks are well defined in the art, it would be a simple matter to make this determination.

Alternatively, one of ordinary skill in the art might first determine whether a Bayesian network is used in a process. If so, one of ordinary skill could determine whether the process identifies an underlying issue and an associated sub model.

In any event, regardless of what methodology is used, one of ordinary skill in the pertinent art, when reading the claims in the light of the supporting specification, would be able to ascertain with a reasonable degree of precision and particularity whether a Bayesian network structure is used to identify an underlying issue and associated sub model, as set out in substep (b.1) of claim 1.

Rejection under 35 U.S.C. § 101

Examiner has rejected claims 1 through 36 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicant respectfully traverses the rejection and requests reconsideration.

Criteria for a Rejection under 35 U.S.C. § 101

The Supreme Court has acknowledged that Congress intended 35 U.S.C. § 101 to extend to "anything under the sun that is made by man." Thus, it is improper to read into § 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly

intended such limitations. *In re Alappat*, 33 F.3d 1526, 31 U.S.P.Q. 2d 1545, 1556 (Fed. Cir. 1994).

Machine implementation vs. mental implementation is not a determinative dichotomy in deciding whether a method is statutory under 35 U.S.C. § 101. "[A] process having no practical value other than enhancing the internal operation of [digital computers]" is in the technological or useful arts and hence is statutory under § 101. *In re McIlroy*, 422 F.2d 1397, 170 U.S.P.Q. 31 (C.C.P.A. 1971).

Claims may be rejected under § 101 because they attempt to embrace only a mathematical formula, mathematical algorithm, or method of calculation, but not merely because they define inventions having something to do with a computer. *In re Diehr and Lutton*, 602 F.2d 982, 203 U.S.P.Q. 44, 50 (C.C.P.A. 1979; *aff'd* 209 U.S.P.Q. 1 (S. Ct. 1981).

In considering a claim for compliance with 35 U.S.C. § 101, it must be determined whether a scientific principle, law of nature, idea, or mental process, which may be represented by a mathematical algorithm, is included in the subject matter of the claim. If it is, it must then be determined whether such principle, law, idea, or mental process is applied in an invention of the type set forth in 35 U.S.C. § 101. Although the line separating statutory processes from nonstatutory processes is unclear, the mere presence of a calculation or the computer implementation of the method does not mandate a holding that the claimed procedure is not a "process" within the meaning of 35 U.S.C. § 101. But,

where the claims solely recite a method whereby a set of numbers is computed

from a different set of numbers by merely performing a series of mathematical

computations, the claims do not set forth a statutory process. *Ex parte Logan*, 20

U.S.P.Q.2d 1465, 1467 B.P.A.I. 1991).

Discussion of Errors in Examiner's Rejection

Examiner has asserted that "the claims focus on a series of steps to be

performed on a computer, but the ideas are disclosed abstractly from any

particular practical application." This is an incorrect characterization of the

claims.

The Manual of Patent Examining Procedure (MPEP) sets out the burden

Examiner has to carry for such a rejection:

> ...Office personnel have the burden to establish a *prima facie* case
> that the claimed invention as a whole is directed to solely an
> abstract idea or to manipulation of abstract ideas or does not
> produce a useful result. Only when the claim is devoid of any
> limitation to a practical application in the technological arts
> should it be rejected under 35 U.S.C. 101...Further, when such a
> rejection is made. Office personnel must expressly state how the
> language of the claims has been interpreted to support the
> rejection...

MPEP 2106 A.

Claim 1

Claim 1 contains no abstract ideas and produces a useful result; therefore,

it is clear that claim 1 sets out statutory subject matter under 35 U.S.C. § 101.

Examiner has failed to show that any abstract idea (e.g., scientific principle, law of nature, idea, or mental process, which may be represented by a mathematical algorithm) or manipulation of abstract ideas even exist in Claim 1. Rather, all the steps set out in claim 1 are concrete actions that are performed towards the end of selecting and using a sub model for issue solution.

In step (a), first information about a presenting issue is obtained from a user. This is a concrete action wherein a user provides specific information.

In step (b), the first information is used within a supermodel to identify an underlying issue and an associated sub model for providing a solution to the underlying issue. There is nothing abstract about this. An underlying issue and a sub model is identified. Substep (b.1) indicates that a Bayesian network structure is used to identify the underlying issue and the associated sub model.

In a step (c) the sub model obtains additional information about the underlying issue from the user. This is a concrete action wherein a user provides specific information.

In step (d), the sub model uses the additional information to identify a solution to the underlying issue. This identification of the solution is not only concrete, but it is also useful. For example, if the presenting issue is a product malfunction (see for example claim 2), then identifying a solution to the malfunction can result in the useful repair of the product malfunction.

The Specification indicates many uses of the invention in a variety of application areas such as diagnostic applications, decision support, selection,

classification, prediction, brokering (e.g., brokering of stocks in companies) See

for example, the Specification at page 6, lines 14 through 19. None of these are

abstract ideas, but are useful results of the method set out in claim 1.

<u>Claim 19</u>

Claim 19 is an apparatus claim that clearly sets out statutory subject

matter.

Examiner has asserted that the elements of claim 19 are recited in means

plus function format. This is incorrect. There is no means plus function

language in claim 19. Claim 19, therefore, does not recite any elements in

means plus function format. Claim 19 is an apparatus claim of the type that is

generally not subject to rejection based on 35 U.S.C. § 101.

Examiner appears to be arguing that claim 19 encompasses any and every

machine for performing an underlying process. This is clearly erroneous.

Examiner has failed to identify any underlying process performed by claim 19.

If such a process was identified by Examiner, it would be clear that claim 19

would not encompass any and every machine for performing such an

underlying process. This is because specific structure (e.g., a supermodel, and a

plurality of sub models) is set out in claim 19. Each of these elements set out in

claim 19 perform specific actions. Any underlying process identifiable in claim

19 would not be completely encompassed by claim 19 provided that process can

be performed by some other element or combination of elements not set out in

claim 19. Clearly then, machinery for accomplishing any underlying process identifiable within claim 19 is not completely encompassed by the structure set out in claim 19.

Conclusion

Applicant believes the present case is in condition for allowance and favorable action is respectfully requested.

Respectfully submitted,
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